

SEQUENCE LISTING

<110> Gaiger, Alexander
 McNeill, Patricia D.
 Smithgall, Molly
 Moulton, Gus
 Vedvick, Thomas S.
 Sleath, Paul R.
 Mossman, Sally
 Evans, Lawrence
 Spies, A. Gregory
 Boydston, Jeremy

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mus musculus

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 50 55 60
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 85 90 95
 Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe
 100 105 110
 Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe
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 165 170 175
 Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln
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 Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser
 195 200 205
 Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp
 210 215 220
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 225 230 235 240
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 Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile
 275 280 285
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 Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys
 325 330 335
 Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro
 340 345 350
 Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Ser Arg Ser Asp
 355 360 365
 Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln
 370 375 380
 Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
 385 390 395 400
 His Thr Arg Thr His Thr Gly Lys Thr Ser Glu Lys Pro Phe Ser Cys
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Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro Pro
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 Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly
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 Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe
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 Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Thr Ile
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 Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe
 165 170 175
 Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln
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 Cys Thr Gly Ser Gln Ala Leu Leu Arg Thr Pro Tyr Ser Ser Asp
 210 215 220
 Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln
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 Met Asn Leu Gly Ala Thr Leu Lys Gly Met Ala Ala Gly Ser Ser Ser
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 Ser Val Lys Trp Thr Glu Gly Gln Ser Asn His Gly Ile Gly Tyr Glu
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 Ser Asp Asn His Thr Ala Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile
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 Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys
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 Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys
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 Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro
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 Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Ser Arg Ser Asp
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 Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln
 370 375 380
 Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
 385 390 395 400
 His Thr Arg Thr His Thr Gly Lys Thr Ser Glu Lys Pro Phe Ser Cys
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Asp Ala Asn Leu Ala Gly Ser Gly Ser Gly His Met Gln His His His
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Ser Arg His Ser Thr Gly Tyr Glu Ser Asp Asn His Thr Thr Pro Ile
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Leu Cys Gly Ala Gln Tyr Arg Ile His Thr His Gly Val Phe Arg Gly
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Ser Ala Ser Glu Thr Ser Glu Lys Arg Pro Phe Met Cys Ala Tyr Pro
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 Gly Cys Asn Lys Arg Tyr Phe Lys Leu Ser His Leu Gln Met His Ser
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 Arg Lys His Thr Gly Glu Lys Pro Tyr Gln Cys Asp Phe Lys Asp Cys
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 His Thr Gly Val Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe
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 35 40 45
 Pro Ile Leu Asp Glu Ile Ala Asp Glu Tyr Gln Gly Lys Leu Thr Val
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 Ala Lys Leu Asn Ile Asp Gln Asn Pro Gly Thr Ala Pro Lys Tyr Gly
 65 70 75 80
 Ile Arg Gly Ile Pro Thr Leu Leu Leu Phe Lys Asn Gly Glu Val Ala
 85 90 95
 Ala Thr Lys Val Gly Ala Leu Ser Lys Gly Gln Leu Lys Glu Phe Leu
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 Asp Ala Asn Leu Ala Gly Ser Gly Ser Gly His Met Gln His His His
 115 120 125
 His His His Val Ser Ile Glu Gly Arg Ala Ser Ser Gly Gly Ser Gly
 130 135 140
 Leu Val Pro Arg Gly Ser Ser Gly Ser Gly Asp Asp Asp Lys Ser
 145 150 155 160
 Ser Arg Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val
 165 170 175
 Pro Ser Leu Gly Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala
 180 185 190
 Ala Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala
 195 200 205
 Tyr Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro

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| Leu | Val | Asp | Phe | Trp | Ala | Glu | Trp | Cys | Gly | Pro | Cys | Lys | Met | Ile | Ala | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Pro | Ile | Leu | Asp | Glu | Ile | Ala | Asp | Glu | Tyr | Gln | Gly | Lys | Leu | Thr | Val | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ala | Lys | Leu | Asn | Ile | Asp | Gln | Asn | Pro | Gly | Thr | Ala | Pro | Lys | Tyr | Gly | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Ile | Arg | Gly | Ile | Pro | Thr | Leu | Leu | Leu | Phe | Lys | Asn | Gly | Glu | Val | Ala | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ala | Thr | Lys | Val | Gly | Ala | Leu | Ser | Lys | Gly | Gln | Leu | Lys | Glu | Phe | Leu | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Asp | Ala | Asn | Leu | Ala | Gly | Ser | Gly | Ser | Gly | His | Met | Gln | His | His | His | |
| | | 115 | | | | 120 | | | | | | 125 | | | | |
| His | His | His | Val | Ser | Ile | Glu | Gly | Arg | Ala | Ser | Ser | Gly | Gly | Ser | Gly | |
| | 130 | | | | 135 | | | | | | 140 | | | | | |
| Leu | Val | Pro | Arg | Gly | Ser | Ser | Gly | Ser | Gly | Asp | Asp | Asp | Asp | Lys | Ser | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Arg | Met | Gly | Ser | Asp | Val | Arg | Asp | Leu | Asn | Ala | Leu | Leu | Pro | Ala | |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Ser | Leu | Gly | Gly | Gly | Gly | Gly | Cys | Ala | Leu | Pro | Val | Ser | Gly |
| Ala | Ala | Gln | Trp | Ala | Pro | Val | Leu | Asp | Phe | Ala | Pro | Pro | Gly | Ala | Ser |
| Ala | Tyr | Gly | Ser | Leu | Gly | Gly | Pro | Ala | Pro | Pro | Pro | Ala | Pro | Pro | Pro |
| Pro | Pro | Pro | Pro | Pro | Pro | His | Ser | Phe | Ile | Lys | Gln | Glu | Pro | Ser | Trp |
| Gly | Gly | Ala | Glu | Pro | His | Glu | Glu | Gln | Cys | Leu | Ser | Ala | Phe | Thr | Val |
| His | Phe | Ser | Gly | Gln | Phe | Thr | Gly | Thr | Ala | Gly | Ala | Cys | Arg | Tyr | Gly |
| Pro | Phe | Gly | Pro | Pro | Pro | Pro | Ser | Gln | Ala | Ser | Ser | Gly | Gln | Ala | Arg |
| Met | Phe | Pro | Asn | Ala | Pro | Tyr | Leu | Pro | Ser | Cys | Leu | Glu | Ser | Gln | Pro |
| Ala | Ile | Arg | Asn | Gln | Gly | Tyr | Ser | Thr | Val | Thr | Phe | Asp | Gly | Thr | Pro |
| Ser | Tyr | Gly | His | Thr | Pro | Ser | His | His | Ala | Ala | Gln | Phe | Pro | Asn | His |
| Ser | Phe | Lys | His | Glu | Asp | Pro | Met | Gly | Gln | Gln | Gly | Ser | Leu | Gly | Glu |
| Gln | Gln | Tyr | Ser | Val | Pro | Pro | Pro | Val | Tyr | Gly | Cys | His | Thr | Pro | Thr |
| Asp | Ser | Cys | Thr | Gly | Ser | Gln | Ala | Leu | Leu | Leu | Arg | Thr | Pro | Tyr | Ser |
| Ser | Asp | Asn | Leu | Tyr | Gln | Met | Thr | Ser | Gln | Leu | Glu | Cys | Met | Thr | Trp |
| Asn | Gln | Met | Asn | Leu | Gly | Ala | Thr | Leu | Lys | Gly | His | Ser | Thr | Gly | Tyr |
| Glu | Ser | Asp | Asn | His | Thr | Thr | Pro | Ile | Leu | Cys | Gly | Ala | Gln | Tyr | Arg |
| Ile | His | Thr | His | Gly | Val | Phe | Arg | Gly | Ile | Gln | Asp | Val | Arg | Arg | Val |
| Pro | Gly | Val | Ala | Pro | Thr | Leu | Val | Arg | Ser | Ala | Ser | Glu | Thr | Ser | Glu |
| Lys | Arg | Pro | Phe | Met | Cys | Ala | Tyr | Pro | Gly | Cys | Asn | Lys | Arg | Tyr | Phe |
| Lys | Leu | Ser | His | Leu | Gln | Met | His | Ser | Arg | Lys | His | Thr | Gly | Glu | Lys |
| Pro | Tyr | Gln | Cys | Asp | Phe | Lys | Asp | Cys | Glu | Arg | Arg | Phe | Phe | Arg | Ser |
| Asp | Gln | Leu | Lys | Arg | His | Gln | Arg | Arg | His | Thr | Gly | Val | Lys | Pro | Phe |
| Gln | Cys | Lys | Thr | Cys | Gln | Arg | Lys | Phe | Ser | Arg | Ser | Asp | His | Leu | Lys |
| Thr | His | Thr | Arg | Thr | His | Thr | Gly | Glu | Lys | Pro | Phe | Ser | Cys | Arg | Trp |
| Pro | Ser | Cys | Gln | Lys | Lys | Phe | Ala | Arg | Ser | Asp | Glu | Leu | Val | Arg | His |
| His | Asn | Met | His | Gln | Arg | Asn | Met | Thr | Lys | Leu | Gln | Leu | Ala | Leu | |

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His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg Val Pro Gly Val
        35                      40                      45

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Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys Arg Pro
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 Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys Leu Ser
 65 70 75 80
 His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro Tyr Gln
 85 90 95
 Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Phe Arg Ser Asp Gln Leu
 100 105 110
 Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln Cys Lys
 115 120 125
 Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr
 130 135 140
 Arg Thr His Thr Gly Glu Lys Pro Phe Ser Cys Arg Trp Pro Ser Cys
 145 150 155 160
 Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val Arg His His Asn Met
 165 170 175
 His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala Leu
 180 185

<210> 337
 <211> 324
 <212> DNA
 <213> Homo sapiens

<400> 337
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 tgggctccag ttctggactt cgcaccgcct ggtgcatccg catacggttc cctgggtggt 180
 ccagcacctc cgcccgcaac gccccaccg cctccaccgc ccccgccactc cttcatcaaa 240
 caggaaccta gctggggttg tgcagaaccg cacgaagaac agtgcctgag cgcattctga 300
 gaattctgca gatatccatc acac 324

<210> 338
 <211> 462
 <212> DNA
 <213> Homo sapiens

<400> 338
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 ttctccggcc agttcaactg cacagccgga gcctgtcgct acggggccctt cggtcctcct 120
 ccgcccagcc aggcgtcatc cggccaggcc aggatgtttc ctaacgcgcc ctacctgcc 180
 agctgcctcg agagccagcc cgctattcgc aatcagggtt acagcacggt caccttcgac 240
 gggacgccc gctacggtca cagccctcg caccatgcgg cgcagttccc caaccactca 300
 ttcaagcatg aggatcccat gggccagcag ggctcgctgg gtgagcagca gtactcggtg 360
 ccgcccccg tctatggctg ccacaccccc accgacagct gcaccggcag ccaggctttg 420
 ctgctgagga cgccctacag cagtgacaat ttatactgat ga 462

<210> 339
 <211> 405
 <212> DNA
 <213> Homo sapiens

<400> 339
 atgcagcatc accaccatca ccaccaggct ttgctgctga ggacgcccta cagcagtgac 60

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<210> 342
<211> 99
<212> PRT
<213> Homo sapiens
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[illegible]

<211> 152

<213> Homo sapiens

| | | | | | | | | | | | | | | | |
|------------|-----|-----------|------------|-----------|------------|-----------|------------|------------|-----------|-----|------------|------------|-----------|-----|-----------|
| Met | Gln | His | His | His 5 | His | His | His | His | Glu 10 | Glu | Gln | Cys | Leu | Ser | Ala |
| Phe | Thr | Val | His 20 | Phe | Ser | Gly | Gln | Phe 25 | Thr | Gly | Thr | Ala | Gly 30 | Ala | Cys |
| Arg | Tyr | Gly 35 | Pro | Phe | Gly | Pro | Pro 40 | Pro | Pro | Ser | Gln | Ala 45 | Ser | Ser | Gly |
| Gln | Ala | Arg | Met | Phe | Pro | Asn 55 | Ala | Pro | Tyr | Leu | Pro 60 | Ser | Cys | Leu | Glu |
| Ser 65 | Gln | Pro | Ala | Ile 70 | Arg | Asn | Gln | Gly | Tyr 75 | Ser | Thr | Val | Thr | Phe | Asp 80 |
| Gly | Thr | Pro | Ser | Tyr 85 | Gly | His | Thr | Pro | Ser 90 | His | His | Ala | Ala | Gln | Phe |
| Pro | Asn | His | Ser 100 | Phe | Lys | His | Glu | Asp 105 | Pro | Met | Gly | Gln | Gln | Gly | Ser |
| Leu | Gly | Glu | Gln | Gln | Tyr | Ser | Val 120 | Pro | Pro | Pro | Val | Tyr 125 | Gly | Cys | His |
| Thr | Pro | Thr | Asp | Ser | Cys | Thr | Gly 135 | Ser | Gln | Ala | Leu 140 | Leu | Leu | Arg | Thr |
| Pro 145 | Tyr | Ser | Ser | Asp | Asn 150 | Leu | Tyr | | | | | | | | |

<211> 133

<213> Homo sapiens

Met Gln His His His His His Gln Ala Leu Leu Leu Arg Thr Pro
5 10 15
Tyr Ser Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met
20 25 30

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<210> 345
<211> 112
<212> PRT
<213> Homo sapiens
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<210> 346
<211> 369
<212> PRT
<213> Homo sapiens
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| | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| <400> 346 | | | | | | | | | | | | | | | | |
| Met | Gln | His | His | His | His | His | His | His | Ser | Phe | Ile | Lys | Gln | Glu | Pro | |
| | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ser | Trp | Gly | Gly | Ala | Glu | Pro | His | Glu | Glu | Gln | Cys | Leu | Ser | Ala | Phe | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Thr | Val | His | Phe | Ser | Gly | Gln | Phe | Thr | Gly | Thr | Ala | Gly | Ala | Cys | Arg | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Tyr | Gly | Pro | Phe | Gly | Pro | Pro | Pro | Pro | Ser | Gln | Ala | Ser | Ser | Gly | Gln | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ala | Arg | Met | Phe | Pro | Asn | Ala | Pro | Tyr | Leu | Pro | Ser | Cys | Leu | Glu | Ser | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |

Gln Pro Ala Ile Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly
 85 90 95
 Thr Pro Ser Tyr Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro
 100 105 110
 Asn His Ser Phe Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu
 115 120 125
 Gly Glu Gln Gln Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr
 130 135 140
 Pro Thr Asp Ser Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro
 145 150 155 160
 Tyr Ser Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met
 165 170 175
 Thr Trp Asn Gln Met Asn Leu Gly Ala Thr Leu Lys Gly His Ser Thr
 180 185 190
 Gly Tyr Glu Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln
 195 200 205
 Tyr Arg Ile His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg
 210 215 220
 Arg Val Pro Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr
 225 230 235 240
 Ser Glu Lys Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg
 245 250 255
 Tyr Phe Lys Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly
 260 265 270
 Glu Lys Pro Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Phe
 275 280 285
 Arg Ser Asp Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys
 290 295 300
 Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His
 305 310 315 320
 Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys Pro Phe Ser Cys
 325 330 335
 Arg Trp Pro Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val
 340 345 350
 Arg His His Asn Met His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala
 355 360 365
 Leu

<210> 347
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 347
 ggctccgacg tgcgggacct g

<210> 348
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 353

cacgaagaac agtgcctgag cgcatcac

29

<210> 354

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 354

ccggcgaatt catcagtata aattgtcact gc

32

<210> 355

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 355

caggctttgc tgctgaggac gccc

24

<210> 356

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 356

cacggagaat tcatcactgg tatggtttct cacc

34

<210> 357

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 357

cacagcagga agcacactgg tgagaaac

28

<210> 358

<211> 30

Sequence

<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 358
ggatatctgc agaattctca aagcgccagc

30

<210> 359
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 359
cactccttca tcaaacagga ac

22

<210> 360
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 360
ggatatctgc agaattctca aagcgccagc

30

<210> 361
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 361
ggttccgacg tgcgggacct gaacgcactg ctg

33

<210> 362
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 362
ctgccggcag cagtgcgttc aggtcccgca cgtcggaacc

40

<210> 363

<211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 363
 ccggcagttc catccctggg tggcgggtgga ggctg 35

<210> 364
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 364
 cggcagtgcg cagcctccac cgccacccag ggatggaa 38

<210> 365
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 365
 cgcaactgccg gttagcggtg cagcacagtg ggctc 35

<210> 366
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 366
 cagaactgga gccactgtg ctgcaccgct aac 33

<210> 367
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 367
 cagttctgga cttcgcaccg cctgggtgcat ccgcatac 38

U01350 : T33360

<210> 373
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 373
 gaacctagct ggggtggtgc agaaccgcac gaagaaca 38

<210> 374
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 374
 ctcaggcact gttcttcgtg cggttctgca ccaccccag 39

<210> 375
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 375
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<210> 376
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 376
 gtgtgatgga tatctgcaga attctcagaa tgcg 34

<210> 377
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> 253,256,517,518,520,521,522,743,753,754,

758

<223> n = A,T,C or G

<400> 377

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ggtggtggtt gcgcactgcc ggtagcggt gcagcacagt gggctccggt tctggacttc 120
gcaccgccgg gtgcatccgc acacgggtccc ctgggtgggt cggcgccgcc gtccggcaccg 180
ccgccgccgc cggcgccgcc gccgcactcc ttcatacaaac agggaccgag ctgggggtggc 240
gcggaactgc ackaakaaca gtacctgagc gcgttcaccg ttcactcctc cggtcagggtt 300
cactggcacg gccggggcct gtgcctacgg gccctcggc cccctcggc ccagccaggc 360
gtcatccggc caggccagga tgtctcctag cgcgccctgc ctgcccagcc gcctcgagag 420
ccagcccgtc acccgcaatc ggggctacag cacggtcacc ttcgacgggg cgtccggcta 480
cggtcacacg ccctcgacc atgcggcgca gttctcsmar yyactcgta ggcgtgagga 540
tcccatgggc cagcagggtc cgctgggtga gcagcagtg tggcgccgc ccccgccctg 600
tgcccgccac acccccgccg acagctgcgc cggcagccag gctttgctgc tgagggcgcc 660
ctgtagcagc gacggtttat accaagtgc gtcccagctt gagtgcattg cctggagtca 720
gatgagcctc gggcgccgtc tamcgggcca cakyacargg tacgagagcg atgatcacac 780
aacgccggc ctctgcggag cccaatacag cacggtgcct tcagggcgct 840
tcagggtgtg cggcgtgtgc ctggagtgc cccgactctt gtacggtcgg catctgaggc 900
cagtgaggaa cgccccctca tgtgtgctta cccaggtgc aataggaggt atctgaagct 960
gccccgctta cagatgcacg gtaggaagca cgctggtgag agaccatacc agtgtgactt 1020
caaggactgt ggacggaggt ttttctgctc agaccggctc aaaagacacc aggggaggca 1080
tacagatgtg aagccattcc agcgtaaagc ctgtcagcga gggttctccc ggccaacca 1140
cctgaagacc cagccagga ctcatgcagg tgaaaagccc cccagctgtc ggtggtcaga 1200
ttgtcagaga aagcctgccc ggtcaagtga gttggtccgc catcgcgaca tgcacagag 1260
gggcatgacc gaactccagc tggcgctttg aa 1292

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<210> 378

<211> 1291

<212> DNA

<213> Homo sapiens

<400> 378

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gtaccgccgg gtgcgctgt atgcggttcc ctgggtggcc cggcaccgcc gccagcgccg 180
ccgcgctgc cggcgccgcc gtgcactcc ttcacaaac aggaaccgag ttgggggtggt 240
acagagccgc acgcaggaca gggccggagc gcactcgctg ctactcctc cggccagttc 300
actggcacag ccggagcctg tgcctacggg ccctcgggtc ctctccgcc cagccaggcg 360
tcatccggcc aggccaggat gtttcttaac gcgccctacc tggccagctg cctcgagagc 420
cagcccgtca ttcgcaatca gggttacagc acggtcacct tcgacgggac gccagctac 480
ggtcacacgc cctcgacca tgcggcgag ttcccaacc actcatcaa gcatgaggac 540
cccatgggccc agcagggtc gccgggtgag cagcagtact cggcgccgcc cccggtctgc 600
ggctgccgca ccccaaccgg cagctgcacc ggcagccagg ctttgetgct gagggcgccc 660
tacagcggtg gcgatctaca ccaaacgaca tccagcttg gacacatggc ctggaatcag 720
acgaacttag gagccacctt aaagggccac ggcacagggt acgagagcga tgaccacaca 780
acgcccattc tctcggaac ccagtaagc atacgcgcgc gcggcgctct ccgggtgact 840
caggatgtgc ggtgtgtgcc tggggtggcc ccgactcttg tgcggtcgcc atctgagacc 900
agtgagaagc gccctcat gtgtgcctac ccaggctgca ataagagaca ctttaagccg 960
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aaggaccgtg gacgagggt tctccgtcca gaccagctca aaaggacca gagggggcat 1080
acaggtgtga aacctctcca gtgtgaagct tgacggcgga ggcccccccg acccgccac 1140
ctgaagggtc acaccaggac ccatacaggt ggagagccct tcagttgtcg gtggccaagt 1200
tgtcaggaga agtctgcccc gccagatgaa tcagcccgcc gtcataacat gcatcagaga 1260

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aacatgacca aactccagct ggcgctttga a

1291

<210> 379

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 379

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gcaccgccgg gcgcacccgc atacgattcc ctgggtggcc cggcaccgcc gccggcgccg 180
ccgccgccgc cggcgccgcc gccgactcc tgcggcgaac aggggcccag ctgggtggt 240
gcagaaccgc gcgaggggca atgcctgagt gcgccgccg tccgttctc cggccggttc 300
accggcacag tcggagcctg tcgctatggg ccctcgggtc ctctccgcc cagccaggcg 360
ccatccggcc agaccaggat gttgccagc gcgccctatc tgcgagttg cctcaggagc 420
cggctccgcta tccgtagtca gggtcgcagc acggcacctt cagcggggcg cccagctatg 480
gcacccaccc tcgcaccacc ggcgagtc cactactccc aacatggggg cctacatggg 540
ccagcagggc tcgtgggtg agcagcagta ctcggtgccg cccccggtct atggctgcc 600
cacccccacc gacagctgca ccggcagcca ggctttgctg ctgaggacgc cctacagcag 660
tgacaattta taccaaatga catccagct tgaatgcatg acctggaatc agatgaactt 720
aggagccacc ttaaagggcc acagcacagg gtacgagagc gataaccaca caacgcccc 780
cctctgcgga gcccaataca gaatacacac gcacggtgtc ttcagaggca ttcaggatgt 840
gcgacgtgtg cctggagtag ccccgactct tgtacgtag cacctgagac cagtgagaac 900
gcccccttgg gtgtgttacc ggggctgcag taagggtat tttaagccgt cccacttacg 960
ggtgcacagc aggaagcgca ttggtgagac gccacgccag tgcgactcca agggccgtgg 1020
acgagggcct ctccgttcgg gaccagcccc agggacacca aaggagacat acaggtagc 1080
aaccactcca gtgtaaggct tgtcagcgaa ggttcccccg gtccgaccac ctgagggccc 1140
acgccagggc ccacacgggt gggaagcccc tcagctgccg gtggccaagc tgccagagag 1200
ggttcgcccc gtgagacgaa ttagtcgctc atcacaacat gtatcagcga aacatgacta 1260
aactccagct ggcgctttga a

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<210> 380

<211> 3020

<212> DNA

<213> Homo sapiens

<400> 380

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acttcccgcc ctccctccca cctactcatt caccacccca cccaccaga gccgggacgg 120
cagcccaggc gcccgggccc cgcggtctcc tcgcccgcat cctggacttc ctcttctgtc 180
aggacccggc ttccacgtgt gtcccggagc cggcgtctca gcacacgctc cgctccgggc 240
ctgggtgcct acagcagcca gagcagcagg gagtccggga cccgggcggc atctgggcca 300
agttaggcgc cggcgaggcc agcgctgaac gtctccaggg ccggaggagc cgcggggcgt 360
ccgggtctga gcctcagcaa atgggctccg acgtgcggga cctgaacgcg ctgctgcccg 420
ccgtcccttc cctgggtggc ggcgggcggt gtgccctgcc tgtgagcggc gcggcgagc 480
gggcgcgggt gctggacttt gcgcccccg gcgcttcggc ttacgggtcg ttgggcggcc 540
ccgcgcggcc accggctccg ccgccacccc cgcgcggccc gcctcactcc ttcataaac 600
aggagccgag ctggggcggc gcggagccgc acgaggagca gtgcctgagc gccttactg 660
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ctctccgcc cagccaggcg tcatccggcc aggccaggat gtttcctaac gcgccctacc 780
tgcccagctg cctcgagagc cagcccgcta ttcgcaatca gggttacagc acggtcacct 840
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```

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<210> 381
<211> 1291
<212> DNA
<213> Homo sapiens
```

| <400> 381 | | | | | | |
|------------|------------|------------|-------------|------------|-------------|-----|
| atgggctccg | acgttcgtga | cctgaacgca | ctgctgccgg | cagttccgtc | cctgggtggg | 60 |
| ggtggtggtt | gcgcactgcc | ggttagcggt | gcagcacagt | gggctccggt | tctggacttc | 120 |
| gcaccgccgg | gtgcatccgc | atacggttcc | ctgggtggtc | cggcaccgcc | gccggcaccg | 180 |
| ccgcgcgcgc | cgccgcgcgc | gccgcactcc | ttcatcaaac | aggaaccgag | ctggggtggg | 240 |
| gcagaaccgc | acgaagaaca | gtgcctgagc | gcattcaccg | ttcacttctc | cgccaggttc | 300 |
| actggcacag | ccggagcctg | tcgctacggg | cccttcggtc | ctcctccgcc | cagccaggcg | 360 |
| tcatccggcc | aggccaggat | gtttcctaac | gcgcctacc | tgcccagctg | cctcgagagc | 420 |
| cagcccgtca | ttcgcaatca | gggttacagc | acggtcacct | tcgacgggac | gccagctac | 480 |
| ggtcacacga | cctcgacca | tgcggcgcag | ttccccaacc | actcattcaa | gcatgaggat | 540 |
| cccatgggcc | agcagggtct | gctgggtgag | cagcagtaact | cggtgccgcc | cccggctctat | 600 |
| gggtgccaca | ccccaccgca | caqctgcacc | ggcagccagg | ctttgctgct | gaggacgccc | 660 |

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<210> 382
<211> 1491
<212> DNA
<213> Homo sapiens
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```
<210> 383
<211> 1251
<212> DNA
<213> Homo sapiens
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<400> 383

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cctcatgcat tgtcgtcagc agccatgttt atggtgaaaa atggcaacgg gaccgcgtgc 120
ataatggcca acttctctgc tgccttctca gtgaactacg acaccaagag tggccccaag 180
aacatgacct ttgacctgcc atcagatgcc acagtgggtg tcaaccgcag ctccgttgga 240
aaagagaaca cttctgaccc cagtctcgtg attgcttttg gaagaggaca tacactcact 300
ctcaatttca cgagaaatgc aacacgttac agcgttcagc tcatgagttt tgtttataac 360
ttgtcagaca cacacctttt cccaatgcg agctccaaag aaatcaagac tgtggaatct 420
ataactgaca tcagggcaga tatagataaa aaatacagat gtgttagtgg caccaggtc 480
cacatgaaca acgtgaccgt aacgctccat gatgccacca tccaggcgta cctttccaac 540
agcagcttca gcaggggaga gacacgctgt gaacaagaca ggccttcccc aaccacagcg 600
ccccctgcgc caccagccc ctgcacctca ccctgcccc agagcccctc tgtggacaag 660
tacaacgtga gcggcaccaa cgggacctgc ctgctggcca gcatggggct gcagctgaac 720
ctcacctatg agaggaagga caacacgacg gtgacaaggc ttctcaacat caaccccaac 780
aagacctcgg ccagcgggag ctgcggcgcc cacctggtga ctctggagct gcacagcgag 840
ggcaccaccg tcctgctctt ccagttcggg atgaatgcaa gttctagccg gtttttcccta 900
caaggaatcc agttgaatac aattcttcc tgcgagcgct gcagggcaca gtcgcaatt cctacaagtg caacgcggag 1020
gagcacgtcc gtgtcacgaa ggcgttttca gtcaatatat tcaaagtgtg ggtccaggct 1080
ttcaaggtgg aaggtggcca gtttggtct gtggaggagt gtctgctgga cgagaacagc 1140
acgctgatcc ccatcgctgt ggggtggtgc ctggcggggc tggctctcat cgtcctcatc 1200
gcctacctcg tcggcaggaa gaggagtcac gcaggctacc agactatcta g 1251

```

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<210> 384
<211> 228
<212> DNA
<213> Homo sapiens

```

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<400> 384
atgcagatct tcgtgaagac tctgactggt aagaccatca ccctcgaggt ggagcccagt 60
gacaccatcg agaatgtcaa ggcaaagatc caagataagg aaggcattcc tcctgatcag 120
cagaggttga tctttgccgg aaaacagctg gaagatggtc gtaccctgtc tgactacaac 180
atccagaaaag agtcacacct gcacctggta ctccgtctca gaggtggg 228

```

```

<210> 385
<211> 1515
<212> DNA
<213> Homo sapiens

```

```

<400> 385
atgcagatct tcgtgaagac cctgaccggc aagaccatca ccctggaagt ggagcccagt 60
gacaccatcg aaaatgtgaa ggccaagatc caggataaag aaggcatccc tcccgaccag 120
cagaggctca tctttgcagg caagcagcta gaagatggcc gactctttc tgactacaac 180
atccagaagg agtcgacct gcacctggtc ctctgcctga gaggtgccat gggtccgac 240
gttcgtgacc tgaacgcact gctgccggca gttccgtccc tgggtggtgg tgggtggttg 300
gcaactgccg ttagcgggtg agcacagtgg gctccggttc tggacttcgc accgccgggt 360
gcatccgcat acggttccct ggggtggtcc gcaccgcgc cggcaccgcc gccgccgccg 420
ccgccgccgc actccttcat caaacaggaa ccgagctggg gtggtgcaga accgcacgaa 480
gaacagtgcc tgagcgcatt caccgttcac ttctccggcc agttcactgg cacagccgga 540
gcctgtcgct acgggccctt cggtcctcct ccgccagcc aggcgtcatc cggccaggcc 600
aggatgtttc ctaacgcgcc ctatctgccc agctgcctcg agagccagcc cgctattcgc 660
aatcagggtt acagcacggt caccttcgac gggacgcccc gctacggtca cacgccctcg 720
caccatgcgg cgcagttccc caaccactca ttcaagcatg aggatcccat gggccagcag 780

```



```

ggctcgctgg gtgagcagca gtactcgggtg ccgcccccg tctatggctg ccacaccccc 840
accgacagct gcaccggcag ccaggcctttg ctgctgagga cgccttacag cagtgacaat 900
ttataccaaa tgacatccca gcttgaatgc atgacctgga atcagatgaa cttaggagcc 960
accttaaagg gccacagcac aggggtacgag agcgataacc acacaacgcc catcctctgc 1020
ggagcccaat acagaatata cacgcacggt gtcttcagag gcattcagga tgtgcgacgt 1080
gtgcctggag tagccccgac tcttgtaagg tcggcatctg agaccagtga gaaacgcccc 1140
ttcatgtgtg cttaccagg ctgcaataag agatatttta agctgtccca cttacagatg 1200
cacagcagga agcacactgg tgagaaacca taccagtgtg acttcaagga ctgtgaacga 1260
agggtttttc gttcagacca gctcaaaaga caccaaagga gacatacagg tgtgaaacca 1320
ttccagtgtg aaacttgtca gcgaaagttc tcccgggtccg accacctgaa gaccacaccc 1380
aggactcata cagggtgaaa gcccttcagc tgtcgggtggc caagttgtca gaaaaagttt 1440
gcccggtcag atgaattagt ccgccatcac aacatgcatc agagaaacat gaccaaactc 1500
cagctggcgc tttga                                     1515

```

```

<210> 386
<211> 648
<212> DNA
<213> Homo sapiens

```

```

<400> 386
atgcactcct tcatcaaaca ggaaccgagc tgggggtggtg cagaaccgca cgaagaacag 60
tgctgagcgc cattcaccgt tcaattctcc ggccagtcca ctggcacagc cggagcctgt 120
cgctacgggc cttcgggtcc tcttcggccc agccaggcgt catccggcca ggccaggatg 180
tttcctaacg cgccctacct gccagctgc ctcgagagcc agcccgctat tcgcaatcag 240
ggttacagca cggtcacctt cgacgggacg cccagctacg gtcacacgcc ctgcaccat 300
gcggcgagcgt tccccaaaca ctcatccaag catgaggatc ccatgggcca gcagggtcgc 360
ctgggtgagc agcagtactc ggtgcggccc ccggtctatg gctgccacac cccaccgac 420
agctgcaccg gcagccaggc tttgctgctg aggacgccct acagcagtga caatttatac 480
caaatgacat cccagcttga atgcatgacc tggaaatcaga tgaacttagg agccacctta 540
aagggccaca gcacagggtg cgagagcgat aaccacacaa cgcccatcct ctgcggagcc 600
caatacagaa tacacacgca cgggtgtcttc agaggcatc agtgatga 648

```

```

<210> 387
<211> 1089
<212> DNA
<213> Homo sapiens

```

```

<400> 387
atgcactcct tcatcaaaca ggaaccgagc tgggggtggtg cagaaccgca cgaagaacag 60
tgctgagcgc cattcaccgt tcaattctcc ggccagtcca ctggcacagc cggagcctgt 120
cgctacgggc cttcgggtcc tcttcggccc agccaggcgt catccggcca ggccaggatg 180
tttcctaacg cgccctacct gccagctgc ctcgagagcc agcccgctat tcgcaatcag 240
ggttacagca cggtcacctt cgacgggacg cccagctacg gtcacacgcc ctgcaccat 300
gcggcgagcgt tccccaaaca ctcatccaag catgaggatc ccatgggcca gcagggtcgc 360
ctgggtgagc agcagtactc ggtgcggccc ccggtctatg gctgccacac cccaccgac 420
agctgcaccg gcagccaggc tttgctgctg aggacgccct acagcagtga caatttatac 480
caaatgacat cccagcttga atgcatgacc tggaaatcaga tgaacttagg agccacctta 540
aagggccaca gcacagggtg cgagagcgat aaccacacaa cgcccatcct ctgcggagcc 600
caatacagaa tacacacgca cgggtgtcttc agaggcatc aggatgtgcg acgtgtgcct 660
ggagtagccc cgactcttgt acggtcggca tctgagacca gtgagaaacg ccccttcacg 720
tgtgcttacc caggctgcaa taagagatat ttttaagctgt cccacttaca gatgcacagc 780
aggaagcaca ctggtgagaa accataccag tgtgacttca aggactgtga acgaaggttt 840
tttcgttcag accagctcaa aagacaccaa aggagacata cagggtgtgaa accattccag 900

```

```

tgtaaaactt gtcagcgaaa gttctcccg gtcgaccacc tgaagaccca caccaggact 960
catacagggtg aaaagccctt cagctgtcgg tggccaagtt gtcagaaaaa gtttgcccgg 1020
tcagatgaat tagtccgcca tcacaacatg catcagagaa acatgaccaa actccagctg 1080
gcgctttga                                     1089

```

```

<210> 388
<211> 1035
<212> DNA
<213> Homo sapiens

```

```

<400> 388
atgacggccg cgtccgataa cttccagctg tcccagggtg ggcagggatt cgccattccg 60
atcggggcagg cgatggcgat cgcggggccag atcaagcttc ccaccgttca tatcgggcct 120
accgccttcc tcggcttggg tgttgctgac aacaacggca acggcgcacg agtccaacgc 180
gtggctcggga gcgtcccggc ggcaagtctc ggcattctcca ccggcgacgt gatcaccgcg 240
gtcgcagggcg ctccgatcaa ctcggccacc gcgatggcgg acgcgcttaa cgggcatcat 300
cccgggtgacg tcatctcggg gacctggcaa accaagtcgg gcggcacgcg tacaggggaa 360
gtgacattgg ccgaggggacc cccggccgaa ttccactcct tcatcaaaca ggaaccgagc 420
tgggggtggtg cagaaccgca cgaagaacag tgcttgagcg cattcacctg tcaattctcc 480
ggccagttca ctggcacagc cggagcctgt cgctacgggc ccttcgggtc tcctccgccc 540
agccaggcgt catccggcca ggccaggatg ttctctaacg cgccctacct gccagctgcg 600
ctcgagagcc agcccgtat tcgcaatcag gggttacagc cggtcacctt cgacgggacg 660
cccagctacg gtccacagcc ctgcgacct gcggcgacgt tccccaaaca ctcatccaag 720
catgaggatc ccatgggcca gcagggctcg ctgggtgagc agcagtactc ggtgccgccc 780
ccgggtctatg gctgccacac cccaccgac agctgcaccg gcagccaggc tttgctgctg 840
aggacgcctt acagcagtga caatttatac caaatgacat cccagcttga atgcatgacc 900
tggaatcaga tgaacttagg agccacctta aaggggccaca gcacagggtg cgagagcgat 960
aaccacacaa cgcccatcct ctgcggagcc caatacagaa tacacacgca cgggtgtcttc 1020
agaggcattc agtga                                     1035

```

```

<210> 389
<211> 1263
<212> DNA
<213> Homo sapiens

```

```

<400> 389
atgacggccg cgtccgataa cttccagctg tcccagggtg ggcagggatt cgccattccg 60
atcggggcagg cgatggcgat cgcggggccag atcaagcttc ccaccgttca tatcgggcct 120
accgccttcc tcggcttggg tgttgctgac aacaacggca acggcgcacg agtccaacgc 180
gtggctcggga gcgtcccggc ggcaagtctc ggcattctcca ccggcgacgt gatcaccgcg 240
gtcgcagggcg ctccgatcaa ctcggccacc gcgatggcgg acgcgcttaa cgggcatcat 300
cccgggtgacg tcatctcggg gacctggcaa accaagtcgg gcggcacgcg tacaggggaa 360
gtgacattgg ccgaggggacc cccggccgaa ttcccgctgg tgccgcgcgg cagcccgatg 420
ggctccgacg ttcgggacct gaacgcactg ctgccggcag ttccgtccct ggggtggtgg 480
gggtggttgcg cactgcgggt tagcgggtgca gcacagtggg ctccggttct ggacttcgca 540
ccgcgggtg catccgcata cggttccctg ggtggtccgg caccgcgcgc ggcaaccgcg 600
ccgcgcgcgc cgcgcgcgc gcactccttc atcaaacagg aaccgagctg ggggtggtgca 660
gaaccgcacg aagaacagtg cctgagcgca ttaccgttc acttctccgg ccagttcact 720
ggcacagccg gagcctgtcg ctacggggcc ttccgtcctc ctccgcccag ccaggcgctc 780
tccggccagg ccaggatgtt tcctaacgcg ccctacctgc ccagctgcct cgagagccag 840
cccgtatttc gcaatcaggg ttacagcacg gtcaccttcg acgggacgcc cagctacggg 900
cacacgcctt cgcacctgc ggcgagttc cccaaccact cattcaagca tgaggatccc 960
atgggccagc agggctcgct gggtagcag cagtactcgg tgccgcccc ggtctatggc 1020
tgccacaccc ccaccgacag ctgcaccggc agccaggctt tgctgctgag gacgcccctac 1080

```

```

agcagtgaca atttatacca aatgacatcc cagcttgaat gcatgacctg gaatcagatg 1140
aacttaggag ccaccttaaa gggccacagc acagggtacg agagcgataa ccacacaacg 1200
cccattcctc gcggagccca atacagaata cacacgcacg gtgtcttcag aggcattcag 1260
tga                                          1263

```

<210> 390

<211> 1707

<212> DNA

<213> Homo sapiens

<400> 390

```

atgacggccg cgtccgataa cttccagctg tcccagggtg ggcagggatt cgccattccg 60
atcgggacag cgatggcgat cgcgggccag atcaagcttc ccaccgttca tatcgggcct 120
accgccttcc tcggcttggg tgttgctgac aacaacggca acggcgacag agtccaacgc 180
gtgggtcggga gcgctccggc ggcaagtctc ggcatctcca ccggcgacgt gatcaccgcg 240
gtcgcagggc ctccgatcaa ctccggccacc gcgatggcgg acgcgcttaa cgggcatcat 300
cccgggtgacg tcatctcggg gacctggcaa accaagtcgg gcggcacgcg tacagggaac 360
gtgacattgg ccgagggacc cccggccgaa ttcccgtggg tgccgcgcgg cagcccgatg 420
ggctccgacg ttcgggacct gaacgcactg ctgccggcag ttccgtccct ggggtggtgg 480
gggtggttgc cactgccggg tagcgggtgca gcacagtggg ctccggttct ggacttcgca 540
ccgcgggggt catccgcata cgggttcctg ggtggtccgg caccgcgcgc gccaccgcgc 600
ccgcgcgcgc cgcgcgcgcg gcactccttc atcaaacagg aaccgagctg ggggtggtgca 660
gaaccgcacg aagaacagtg cctgagcgca ttcaccgttc acttctccgg ccagttcact 720
ggcacagccg gagcctgtcg ctacgggccc ttcggtcctc ctccgcccag ccaggcgcta 780
tcgggccagg ccaggatgtt tctaaccgcg ccctacctgc ccagctgcct cgagagccag 840
cccgtatttc gcaatcaggg ttacagcacg gtcaccttcg acgggacgcc cagctacggg 900
cacacgcctt cgcacatgac ggcgacgttc cccaaccact cattcaagca tgaggatccc 960
atggggccagc agggctcgct ggggtgagcag cagtactcgg tgccgccccg ggtctatggc 1020
tgccacaccc ccaccgacag ctgcaccggc agccaggctt tgctgctgag gacgccctac 1080
agcagtgaca atttatacca aatgacatcc cagcttgaat gcatgacctg gaatcagatg 1140
aacttaggag ccaccttaaa gggccacagc acagggtacg agagcgataa ccacacaacg 1200
cccattcctc gcggagccca atacagaata cacacgcacg gtgtcttcag aggcattcag 1260
gatgtgcgac gtgtgcctgg agtagccccg actcttgtag ggtcggcatc tgagaccagt 1320
gagaaacgcc ctttcatgtg tgettaccga ggtgcaata agagatattt taagctgtcc 1380
cacttacaga tgcacagcag gaagcacact ggtgagaaac cataccagtg tgacttcaag 1440
gactgtgaac gaaggttttt tcgttcagac cagctcaaaa gacaccaaag gagacataca 1500
gggtgtgaaac cattccagtg taaaacttgt cagcgaaagt tctccgggtc cgaccacctg 1560
aagacccaca ccaggactca tacagggtgaa aagcccttca gctgtcgggt gccaaagttgt 1620
cagaaaaagt ttgcccgggt agatgaatta gtccgccatc acaacatgca tcagagaaac 1680
atgaccaaac tccagctggc gctttga                                          1707

```

<210> 391

<211> 344

<212> PRT

<213> Homo sapiens

<400> 391

```

Met Thr Ala Ala Ser Asp Asn Phe Gln Leu Ser Gln Gly Gly Gln Gly
      5                                10                                15

```

```

Phe Ala Ile Pro Ile Gly Gln Ala Met Ala Ile Ala Gly Gln Ile Lys
      20                                25                                30

```

```

Leu Pro Thr Val His Ile Gly Pro Thr Ala Phe Leu Gly Leu Gly Val

```

| | | | | | | | | | | | | | | | | | | | | | |
|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|--|--|--|--|
| | 35 | | | | | | | 40 | | | | | | 45 | | | | | | | |
| Val | Asp 50 | Asn | Asn | Gly | Asn | Gly 55 | Ala | Arg | Val | Gln | Arg 60 | Val | Val | Gly | Ser | | | | | | |
| Ala 65 | Pro | Ala | Ala | Ser | Leu 70 | Gly | Ile | Ser | Thr | Gly 75 | Asp | Val | Ile | Thr | Ala 80 | | | | | | |
| Val | Asp | Gly | Ala | Pro 85 | Ile | Asn | Ser | Ala | Thr 90 | Ala | Met | Ala | Asp | Ala 95 | Leu | | | | | | |
| Asn | Gly | His 100 | His | Pro | Gly | Asp | Val 105 | Ile | Ser | Val | Thr | Trp 110 | Gln | Thr | Lys | | | | | | |
| Ser | Gly | Gly 115 | Thr | Arg | Thr | Gly | Asn 120 | Val | Thr | Leu | Ala | Glu 125 | Gly | Pro | Pro | | | | | | |
| Ala 130 | Glu | Phe | His | Ser | Phe | Ile 135 | Lys | Gln | Glu | Pro | Ser 140 | Trp | Gly | Gly | Ala | | | | | | |
| Glu 145 | Pro | His | Glu | Glu | Gln 150 | Cys | Leu | Ser | Ala | Phe 155 | Thr | Val | His | Phe | Ser 160 | | | | | | |
| Gly | Gln | Phe | Thr | Gly 165 | Thr | Ala | Gly | Ala | Cys 170 | Arg | Tyr | Gly | Pro | Phe 175 | Gly | | | | | | |
| Pro | Pro | Pro | Pro 180 | Ser | Gln | Ala | Ser | Ser 185 | Gly | Gln | Ala | Arg | Met 190 | Phe | Pro | | | | | | |
| Asn | Ala | Pro 195 | Tyr | Leu | Pro | Ser | Cys 200 | Leu | Glu | Ser | Gln | Pro 205 | Ala | Ile | Arg | | | | | | |
| Asn 210 | Gln | Gly | Tyr | Ser | Thr | Val 215 | Thr | Phe | Asp | Gly | Thr 220 | Pro | Ser | Tyr | Gly | | | | | | |
| His 225 | Thr | Pro | Ser | His 230 | His | Ala | Ala | Gln | Phe | Pro 235 | Asn | His | Ser | Phe | Lys 240 | | | | | | |
| His | Glu | Asp | Pro | Met 245 | Gly | Gln | Gln | Gly | Ser 250 | Leu | Gly | Glu | Gln | Gln | Tyr 255 | | | | | | |
| Ser | Val | Pro | Pro 260 | Pro | Val | Tyr | Gly | Cys 265 | His | Thr | Pro | Thr 270 | Asp | Ser | Cys | | | | | | |
| Thr | Gly | Ser 275 | Gln | Ala | Leu | Leu | Leu 280 | Arg | Thr | Pro | Tyr 285 | Ser | Ser | Asp | Asn | | | | | | |
| Leu 290 | Tyr | Gln | Met | Thr | Ser | Gln 295 | Leu | Glu | Cys | Met | Thr 300 | Trp | Asn | Gln | Met | | | | | | |
| Asn 305 | Leu | Gly | Ala | Thr | Leu | Lys 310 | Gly | His | Ser | Thr 315 | Gly | Tyr | Glu | Ser | Asp 320 | | | | | | |
| Asn | His | Thr | Thr | Pro | Ile | Leu | Cys | Gly | Ala | Gln | Tyr | Arg | Ile | His | Thr | | | | | | |

| | | | | | | | | | | | | | | | | |
|-------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | 325 | | | | | | 330 | | | | | | 335 |
| His | Gly | Val | Phe | Arg | Gly | Ile | Gln | | | | | | | | | |
| | | | 340 | | | | | | | | | | | | | |
| <210> | 392 | | | | | | | | | | | | | | | |
| <211> | 568 | | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | | |
| <213> | Homo sapiens | | | | | | | | | | | | | | | |
| <400> | 392 | | | | | | | | | | | | | | | |
| Met | Thr | Ala | Ala | Ser | Asp | Asn | Phe | Gln | Leu | Ser | Gln | Gly | Gly | Gln | Gly | |
| | | | | 5 | | | | | 10 | | | | | 15 | | |
| Phe | Ala | Ile | Pro | Ile | Gly | Gln | Ala | Met | Ala | Ile | Ala | Gly | Gln | Ile | Lys | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Leu | Pro | Thr | Val | His | Ile | Gly | Pro | Thr | Ala | Phe | Leu | Gly | Leu | Gly | Val | |
| | | | 35 | | | | 40 | | | | | 45 | | | | |
| Val | Asp | Asn | Asn | Gly | Asn | Gly | Ala | Arg | Val | Gln | Arg | Val | Val | Gly | Ser | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ala | Pro | Ala | Ala | Ser | Leu | Gly | Ile | Ser | Thr | Gly | Asp | Val | Ile | Thr | Ala | |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Val | Asp | Gly | Ala | Pro | Ile | Asn | Ser | Ala | Thr | Ala | Met | Ala | Asp | Ala | Leu | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Asn | Gly | His | His | Pro | Gly | Asp | Val | Ile | Ser | Val | Thr | Trp | Gln | Thr | Lys | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Ser | Gly | Gly | Thr | Arg | Thr | Gly | Asn | Val | Thr | Leu | Ala | Glu | Gly | Pro | Pro | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Ala | Glu | Phe | Pro | Leu | Val | Pro | Arg | Gly | Ser | Pro | Met | Gly | Ser | Asp | Val | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Arg | Asp | Leu | Asn | Ala | Leu | Leu | Pro | Ala | Val | Pro | Ser | Leu | Gly | Gly | Gly | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Gly | Gly | Cys | Ala | Leu | Pro | Val | Ser | Gly | Ala | Ala | Gln | Trp | Ala | Pro | Val | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Leu | Asp | Phe | Ala | Pro | Pro | Gly | Ala | Ser | Ala | Tyr | Gly | Ser | Leu | Gly | Gly | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Pro | Ala | Pro | Pro | Pro | Ala | Pro | Pro | Pro | Pro | Pro | Pro | Pro | Pro | Pro | His | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Ser | Phe | Ile | Lys | Gln | Glu | Pro | Ser | Trp | Gly | Gly | Ala | Glu | Pro | His | Glu | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |

Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe Ser Gly Gln Phe Thr
 225 230 235 240
 Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe Gly Pro Pro Pro Pro
 245 250 255
 Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe Pro Asn Ala Pro Tyr
 260 265 270
 Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile Arg Asn Gln Gly Tyr
 275 280 285
 Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr Gly His Thr Pro Ser
 290 295 300
 His His Ala Ala Gln Phe Pro Asn His Ser Phe Lys His Glu Asp Pro
 305 310 315 320
 Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln Tyr Ser Val Pro Pro
 325 330 335
 Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser Cys Thr Gly Ser Gln
 340 345 350
 Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp Asn Leu Tyr Gln Met
 355 360 365
 Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln Met Asn Leu Gly Ala
 370 375 380
 Thr Leu Lys Gly His Ser Thr Gly Tyr Glu Ser Asp Asn His Thr Thr
 385 390 395 400
 Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile His Thr His Gly Val Phe
 405 410 415
 Arg Gly Ile Gln Asp Val Arg Arg Val Pro Gly Val Ala Pro Thr Leu
 420 425 430
 Val Arg Ser Ala Ser Glu Thr Ser Glu Lys Arg Pro Phe Met Cys Ala
 435 440 445
 Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys Leu Ser His Leu Gln Met
 450 455 460
 His Ser Arg Lys His Thr Gly Glu Lys Pro Tyr Gln Cys Asp Phe Lys
 465 470 475 480
 Asp Cys Glu Arg Arg Phe Phe Arg Ser Asp Gln Leu Lys Arg His Gln
 485 490 495
 Arg Arg His Thr Gly Val Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg
 500 505 510

Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu Gly Gly
180 185 190

Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro Pro Pro Pro Pro His
 195 200 205
 Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro His Glu
 210 215 220
 Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe Ser Gly Gln Phe Thr
 225 230 235 240
 Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe Gly Pro Pro Pro Pro
 245 250 255
 Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe Pro Asn Ala Pro Tyr
 260 265 270
 Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile Arg Asn Gln Gly Tyr
 275 280 285
 Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr Gly His Thr Pro Ser
 290 295 300
 His His Ala Ala Gln Phe Pro Asn His Ser Phe Lys His Glu Asp Pro
 305 310 315 320
 Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln Tyr Ser Val Pro Pro
 325 330 335
 Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser Cys Thr Gly Ser Gln
 340 345 350
 Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp Asn Leu Tyr Gln Met
 355 360 365
 Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln Met Asn Leu Gly Ala
 370 375 380
 Thr Leu Lys Gly His Ser Thr Gly Tyr Glu Ser Asp Asn His Thr Thr
 385 390 395 400
 Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile His Thr His Gly Val Phe
 405 410 415
 Arg Gly Ile Gln
 420

<210> 394

<211> 362

<212> PRT

<213> Homo sapiens

<400> 394

Met His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro

| 5 | | | | | 10 | | | | | 15 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Glu | Glu | Gln | Cys | Leu | Ser | Ala | Phe | Thr | Val | His | Phe | Ser | Gly | Gln |
| 20 | | | | | 25 | | | | | | | 30 | | | |
| Phe | Thr | Gly | Thr | Ala | Gly | Ala | Cys | Arg | Tyr | Gly | Pro | Phe | Gly | Pro | Pro |
| 35 | | | | | 40 | | | | | 45 | | | | | |
| Pro | Pro | Ser | Gln | Ala | Ser | Ser | Gly | Gln | Ala | Arg | Met | Phe | Pro | Asn | Ala |
| 50 | | | | | 55 | | | | | 60 | | | | | |
| Pro | Tyr | Leu | Pro | Ser | Cys | Leu | Glu | Ser | Gln | Pro | Ala | Ile | Arg | Asn | Gln |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Gly | Tyr | Ser | Thr | Val | Thr | Phe | Asp | Gly | Thr | Pro | Ser | Tyr | Gly | His | Thr |
| 85 | | | | | | | 90 | | | | | 95 | | | |
| Pro | Ser | His | His | Ala | Ala | Gln | Phe | Pro | Asn | His | Ser | Phe | Lys | His | Glu |
| 100 | | | | | | | 105 | | | | | 110 | | | |
| Asp | Pro | Met | Gly | Gln | Gln | Gly | Ser | Leu | Gly | Glu | Gln | Gln | Tyr | Ser | Val |
| 115 | | | | | 120 | | | | | 125 | | | | | |
| Pro | Pro | Pro | Val | Tyr | Gly | Cys | His | Thr | Pro | Thr | Asp | Ser | Cys | Thr | Gly |
| 130 | | | | | 135 | | | | 140 | | | | | | |
| Ser | Gln | Ala | Leu | Leu | Leu | Arg | Thr | Pro | Tyr | Ser | Ser | Asp | Asn | Leu | Tyr |
| 145 | | | | 150 | | | 155 | | | | | | | 160 | |
| Gln | Met | Thr | Ser | Gln | Leu | Glu | Cys | Met | Thr | Trp | Asn | Gln | Met | Asn | Leu |
| 165 | | | | | | 170 | | | | 175 | | | | | |
| Gly | Ala | Thr | Leu | Lys | Gly | His | Ser | Thr | Gly | Tyr | Glu | Ser | Asp | Asn | His |
| 180 | | | | | 185 | | | | 190 | | | | | | |
| Thr | Thr | Pro | Ile | Leu | Cys | Gly | Ala | Gln | Tyr | Arg | Ile | His | Thr | His | Gly |
| 195 | | | | | 200 | | | | 205 | | | | | | |
| Val | Phe | Arg | Gly | Ile | Gln | Asp | Val | Arg | Arg | Val | Pro | Gly | Val | Ala | Pro |
| 210 | | | | | 215 | | | 220 | | | | | | | |
| Thr | Leu | Val | Arg | Ser | Ala | Ser | Glu | Thr | Ser | Glu | Lys | Arg | Pro | Phe | Met |
| 225 | | | | 230 | | | 235 | | | | | | | 240 | |
| Cys | Ala | Tyr | Pro | Gly | Cys | Asn | Lys | Arg | Tyr | Phe | Lys | Leu | Ser | His | Leu |
| 245 | | | | | 250 | | | | 255 | | | | | | |
| Gln | Met | His | Ser | Arg | Lys | His | Thr | Gly | Glu | Lys | Pro | Tyr | Gln | Cys | Asp |
| 260 | | | | | 265 | | | | 270 | | | | | | |
| Phe | Lys | Asp | Cys | Glu | Arg | Arg | Phe | Phe | Arg | Ser | Asp | Gln | Leu | Lys | Arg |
| 275 | | | | | 280 | | | | 285 | | | | | | |
| His | Gln | Arg | Arg | His | Thr | Gly | Val | Lys | Pro | Phe | Gln | Cys | Lys | Thr | Cys |

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<210> 395
<211> 214
<212> PRT
<213> Homo sapiens

<400> 395
Met His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro
          5                      10                      15
His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe Ser Gly Gln
          20                      25                      30
Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe Gly Pro Pro
          35                      40                      45
Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe Pro Asn Ala
          50                      55                      60
Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile Arg Asn Gln
          65                      70                      75                      80
Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr Gly His Thr
          85                      90                      95
Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe Lys His Glu
          100                     105                     110
Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln Tyr Ser Val
          115                     120                     125
Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser Cys Thr Gly
          130                     135                     140
Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp Asn Leu Tyr
          145                     150                     155                     160
Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln Met Asn Leu
          165                     170                     175

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<210> 395
<211> 214
<212> PRT
<213> Homo sapiens

<400> 395
Met His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro
          5                      10                      15
His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe Ser Gly Gln
          20                      25                      30
Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe Gly Pro Pro
          35                      40                      45
Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe Pro Asn Ala
          50                      55                      60
Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile Arg Asn Gln
          65                      70                      75                      80
Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr Gly His Thr
          85                      90                      95
Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe Lys His Glu
          100                     105                     110
Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln Tyr Ser Val
          115                     120                     125
Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser Cys Thr Gly
          130                     135                     140
Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp Asn Leu Tyr
          145                     150                     155                     160
Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln Met Asn Leu
          165                     170                     175

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<210> 396
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 396
gacgaaagca tatgcactcc ttcatcaaac
30

<210> 397
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 397
cgcggtgaatt catcactgaa tgcctctgaa g
31

<210> 398
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 398
cgataagcat atgacggccg cgtccgataa c
31

<210> 399
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 399
cgcggtgaatt catcactgaa tgcctctgaa g
31

```

<220>
<223> PCR primer

```
<210> 401
<211> 28
<212> DNA
<213> Artificial Sequence
```

<400> 401
gtctgcagcg gccgctcaaa gcgccagc 28

```
<210> 402
<211> 30
<212> DNA
<213> Artificial Sequence
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<220>
<223> PCR primer

<400> 402
gacgaaagca tatgcactcc ttcatcaaac 30

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<210> 403
<211> 28
<212> DNA
<213> Artificial Sequence
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<220>
<223> PCR primer

<400> 403
gtctgcagcg gccgctcaaa gcgccagc 28

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<210> 404
<211> 449
<212> PRT
<213> Homo sapiens
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<400> 404
Met Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Pro
  1           5           10           15
```

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Gly | Gly | Gly | Gly | Gly | Cys | Ala | Leu | Pro | Val | Ser | Gly | Ala | Ala |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Gln | Trp | Ala | Pro | Val | Leu | Asp | Phe | Ala | Pro | Pro | Gly | Ala | Ser | Ala | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Ser | Leu | Gly | Gly | Pro | Ala | Pro | Pro | Pro | Ala | Pro | Pro | Pro | Pro | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Pro | Pro | Pro | His | Ser | Phe | Ile | Lys | Gln | Glu | Pro | Ser | Trp | Gly | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ala | Glu | Pro | His | Glu | Glu | Gln | Cys | Leu | Ser | Ala | Phe | Thr | Val | His | Phe |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Ser | Gly | Gln | Phe | Thr | Gly | Thr | Ala | Gly | Ala | Cys | Arg | Tyr | Gly | Pro | Phe |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Pro | Pro | Pro | Pro | Ser | Gln | Ala | Ser | Ser | Gly | Gln | Ala | Arg | Met | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Asn | Ala | Pro | Tyr | Leu | Pro | Ser | Cys | Leu | Glu | Ser | Gln | Pro | Ala | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Asn | Gln | Gly | Tyr | Ser | Thr | Val | Thr | Phe | Asp | Gly | Thr | Pro | Ser | Tyr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gly | His | Thr | Pro | Ser | His | His | Ala | Ala | Gln | Phe | Pro | Asn | His | Ser | Phe |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Lys | His | Glu | Asp | Pro | Met | Gly | Gln | Gln | Gly | Ser | Leu | Gly | Glu | Gln | Gln |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Tyr | Ser | Val | Pro | Pro | Pro | Val | Tyr | Gly | Cys | His | Thr | Pro | Thr | Asp | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Cys | Thr | Gly | Ser | Gln | Ala | Leu | Leu | Leu | Arg | Thr | Pro | Tyr | Ser | Ser | Asp |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Asn | Leu | Tyr | Gln | Met | Thr | Ser | Gln | Leu | Glu | Cys | Met | Thr | Trp | Asn | Gln |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Met | Asn | Leu | Gly | Ala | Thr | Leu | Lys | Gly | Val | Ala | Ala | Gly | Ser | Ser | Ser |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ser | Val | Lys | Trp | Thr | Glu | Gly | Gln | Ser | Asn | His | Ser | Thr | Gly | Tyr | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Ser | Asp | Asn | His | Thr | Thr | Pro | Ile | Leu | Cys | Gly | Ala | Gln | Tyr | Arg | Ile |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| His | Thr | His | Gly | Val | Phe | Arg | Gly | Ile | Gln | Asp | Val | Arg | Arg | Val | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Gly | Val | Ala | Pro | Thr | Leu | Val | Arg | Ser | Ala | Ser | Glu | Thr | Ser | Glu | Lys |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Arg | Pro | Phe | Met | Cys | Ala | Tyr | Pro | Gly | Cys | Asn | Lys | Arg | Tyr | Phe | Lys |
| | | | 325 | | | | | | 330 | | | | | 335 | |
| Leu | Ser | His | Leu | Gln | Met | His | Ser | Arg | Lys | His | Thr | Gly | Glu | Lys | Pro |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Tyr | Gln | Cys | Asp | Phe | Lys | Asp | Cys | Glu | Arg | Arg | Phe | Ser | Arg | Ser | Asp |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Gln | Leu | Lys | Arg | His | Gln | Arg | Arg | His | Thr | Gly | Val | Lys | Pro | Phe | Gln |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Cys | Lys | Thr | Cys | Gln | Arg | Lys | Phe | Ser | Arg | Ser | Asp | His | Leu | Lys | Thr |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| His | Thr | Arg | Thr | His | Thr | Gly | Lys | Thr | Ser | Glu | Lys | Pro | Phe | Ser | Cys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Arg | Trp | Pro | Ser | Cys | Gln | Lys | Lys | Phe | Ala | Arg | Ser | Asp | Glu | Leu | Val |
| | | 420 | | | | | | 425 | | | | | 430 | | |
| Arg | His | His | Asn | Met | His | Gln | Arg | Asn | Met | Thr | Lys | Leu | Gln | Leu | Ala |
| | | 435 | | | | | 440 | | | | | 445 | | | |

Leu

<210> 405
 <211> 428
 <212> PRT
 <213> Homo sapiens

<400> 405

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Met Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Pro
 1          5          10          15
Ser Pro Gly Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Thr
          20          25          30
Gln Trp Ala Pro Val Leu Asp Phe Val Pro Pro Gly Ala Pro Val Cys
          35          40          45
Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Leu Pro
          50          55          60
Pro Pro Pro Ser His Ser Phe Thr Lys Gln Glu Pro Ser Trp Gly Gly
65          70          75          80
Thr Glu Pro His Ala Gly Gln Gly Arg Ser Ala Leu Val Ala His Ser
          85          90          95
Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe
          100          105          110
Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe
          115          120          125
Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile
          130          135          140
Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr
145          150          155          160
Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Ser
          165          170          175
Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Pro Gly Glu Gln Gln
          180          185          190
Tyr Ser Ala Pro Pro Pro Val Cys Gly Cys Arg Thr Pro Thr Gly Ser
          195          200          205
Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Ala Pro Tyr Ser Gly Gly
          210          215          220
Asp Leu His Gln Thr Thr Ser Gln Leu Gly His Met Ala Trp Asn Gln
225          230          235          240
Thr Asn Leu Gly Ala Thr Leu Lys Gly His Gly Thr Gly Tyr Glu Ser
          245          250          255
Asp Asp His Thr Thr Pro Ile Leu Cys Gly Thr Gln Tyr Arg Ile Arg
          260          265          270
Ala Arg Gly Val Leu Arg Gly Thr Gln Asp Val Arg Cys Val Pro Gly
          275          280          285
Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys Arg
          290          295          300
Pro Leu Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg His Phe Lys Pro
305          310          315          320
Ser Arg Leu Arg Val Arg Gly Arg Glu Arg Thr Gly Glu Lys Pro Tyr
          325          330          335
Gln Arg Asp Phe Lys Asp Arg Gly Arg Gly Leu Leu Arg Pro Asp Gln
          340          345          350

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Leu Lys Arg His Gln Arg Gly His Thr Gly Val Lys Pro Leu Gln Cys
 355 360 365
 Glu Ala Arg Arg Arg Pro Pro Arg Pro Gly His Leu Lys Val His Thr
 370 375 380
 Arg Thr His Thr Gly Gly Glu Pro Phe Ser Cys Arg Trp Pro Ser Cys
 385 390 395 400
 Gln Glu Lys Ser Ala Arg Pro Asp Glu Ser Ala Arg Arg His Asn Met
 405 410 415
 His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala Leu
 420 425

<210> 406

<211> 414

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 85, 86, 172, 173, 242, 245, 246, 247

<223> Xaa = Any Amino Acid

<400> 406

Met Gly Ser Asp Val Arg Asp Leu Ser Ala Leu Leu Pro Ala Val Pro
 1 5 10 15
 Ser Leu Gly Asp Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala
 20 25 30
 Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala His
 35 40 45
 Gly Pro Leu Gly Gly Pro Ala Pro Pro Ser Ala Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro His Ser Phe Ile Lys Gln Gly Pro Ser Trp Gly Gly
 65 70 75 80
 Ala Glu Leu His Xaa Xaa Gln Tyr Leu Ser Ala Phe Thr Val His Ser
 85 90 95
 Ser Gly Gln Val His Trp His Gly Arg Gly Leu Ser Leu Arg Ala Pro
 100 105 110
 Arg Pro Pro Ser Ala Gln Pro Gly Val Ile Arg Pro Gly Gln Asp Val
 115 120 125
 Ser Arg Ala Leu Pro Ala Gln Pro Pro Arg Glu Pro Ala Arg Tyr Pro
 130 135 140
 Gln Ser Gly Leu Gln His Gly His Leu Arg Arg Gly Val Arg Leu Arg
 145 150 155 160
 Ser His Ala Leu Ala Pro Cys Gly Ala Val Leu Xaa Xaa Thr Arg Ala
 165 170 175
 Gly Ser His Gly Pro Ala Gly Ser Ala Gly Ala Ala Val Leu Gly Ala
 180 185 190
 Ala Pro Gly Leu Trp Pro Pro His Pro Arg Arg Gln Leu Arg Arg Gln
 195 200 205
 Pro Gly Phe Ala Ala Glu Gly Ala Leu Gln Arg Arg Phe Ile Pro Ser
 210 215 220
 Asp Val Pro Ala Val His Gly Leu Glu Ser Asp Glu Pro Arg Gly Arg
 225 230 235 240
 Leu Xaa Gly Pro Xaa Xaa Xaa Val Arg Glu Arg Ser His Asn Ala Arg

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<210> 407
<211> 417
<212> PRT
<213> Homo sapiens
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| Ser | Leu | Gly | Gly | Gly | Gly | Asp | Cys | Thr | Leu | Pro | Val | Ser | Gly | Thr | Ala | |
| | | | 20 | | | | 25 | | | | | | 30 | | | |
| Gln | Trp | Ala | Pro | Val | Pro | Ala | Ser | Ala | Pro | Pro | Gly | Ala | Ser | Ala | Tyr | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Asp | Ser | Leu | Gly | Gly | Pro | Ala | Pro | Pro | Pro | Ala | Pro | Pro | Pro | Pro | Pro | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Pro | Pro | Pro | Pro | His | Ser | Cys | Gly | Glu | Gln | Gly | Pro | Ser | Trp | Gly | Gly | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Ala | Glu | Pro | Arg | Glu | Gly | Gln | Cys | Leu | Ser | Ala | Pro | Ala | Val | Arg | Phe | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Gly | Arg | Phe | Thr | Gly | Thr | Val | Gly | Ala | Cys | Arg | Tyr | Gly | Pro | Leu | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Gly | Pro | Pro | Pro | Pro | Ser | Gln | Ala | Pro | Ser | Gly | Gln | Thr | Arg | Met | Leu | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Pro | Ser | Ala | Pro | Tyr | Leu | Ser | Ser | Cys | Leu | Arg | Ser | Arg | Ser | Ala | Ile | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Arg | Ser | Gln | Gly | Arg | Ser | Thr | Ala | Pro | Ser | Ala | Gly | Arg | Pro | Ala | Met | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Ala | Pro | Thr | Leu | Ala | Pro | Pro | Ala | Gln | Ser | His | Tyr | Ser | Gln | His | Gly | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Val | Leu | His | Gly | Pro | Ala | Gly | Leu | Ala | Gly | Ala | Ala | Val | Leu | Gly | Ala | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Ala | Pro | Gly | Leu | Trp | Leu | Pro | His | Pro | His | Arg | Gln | Leu | His | Arg | Gln | |

195 200 205
 Pro Gly Phe Ala Ala Glu Asp Ala Leu Gln Gln Gln Phe Ile Pro Asn
 210 215 220
 Asp Ile Pro Ala Met His Asp Leu Glu Ser Asp Glu Leu Arg Ser His
 225 230 235 240
 Leu Lys Gly Pro Gln His Arg Val Arg Glu Arg Pro His Asn Ala His
 245 250 255
 Pro Leu Arg Ser Pro Ile Gln Asn Thr His Ala Arg Cys Leu Gln Arg
 260 265 270
 His Ser Gly Cys Ala Thr Cys Ala Trp Ser Ser Pro Asp Ser Cys Thr
 275 280 285
 Val Ala Pro Glu Thr Ser Glu Asn Ala Pro Trp Cys Val Leu Pro Gly
 290 295 300
 Leu Gln Gly Val Phe Ala Val Pro Leu Thr Gly Ala Gln Gln Glu Ala
 305 310 315 320
 His Trp Asp Ala Thr Pro Val Arg Leu Gln Gly Pro Trp Thr Arg Ala
 325 330 335
 Ser Pro Phe Gly Thr Ser Pro Arg Asp Thr Lys Gly Asp Ile Gln Val
 340 345 350
 Arg Asn His Ser Ser Val Arg Leu Val Ser Glu Gly Ser Pro Gly Pro
 355 360 365
 Thr Thr Gly Pro Thr Pro Gly Pro Thr Arg Val Gly Ser Pro Ser Ala
 370 375 380
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 405 410 415
 Glu

<210> 408

<211> 429

<212> PRT

<213> Homo sapiens

<400> 408

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 Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr
 35 40 45
 Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly
 65 70 75 80
 Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe
 85 90 95
 Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe
 100 105 110
 Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe
 115 120 125
 Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile

130 135 140
 Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr
 145 150 155 160
 Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe
 165 170 175
 Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln
 180 185 190
 Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser
 195 200 205
 Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp
 210 215 220
 Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln
 225 230 235 240
 Met Asn Leu Gly Ala Thr Leu Lys Gly His Ser Thr Gly Tyr Glu Ser
 245 250 255
 Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile His
 260 265 270
 Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg Val Pro Gly
 275 280 285
 Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys Arg
 290 295 300
 Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys Leu
 305 310 315 320
 Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro Tyr
 325 330 335
 Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Phe Arg Ser Asp Gln
 340 345 350
 Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln Cys
 355 360 365
 Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His
 370 375 380
 Thr Arg Thr His Thr Gly Glu Lys Pro Phe Ser Cys Arg Trp Pro Ser
 385 390 395 400
 Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val Arg His His Asn
 405 410 415
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<210> 409

<211> 495

<212> PRT

<213> Homo sapiens

<400> 409

Met Ala Ala Pro Gly Ala Arg Arg Ser Leu Leu Leu Leu Leu Leu Ala
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 Gly Leu Ala His Gly Ala Ser Ala Leu Phe Glu Asp Leu Met Gly Ser
 20 25 30
 Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Pro Ser Leu Gly
 35 40 45
 Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala Gln Trp Ala
 50 55 60
 Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 65 | 70 | | | | | | | | 75 | | | | | | | | 80 |
| Gly | Gly | Pro | Ala | Pro | Pro | Pro | Ala | Pro | Pro | Pro | Pro | Pro | Pro | Pro | His | | |
| Ser | Phe | Ile | Lys | 85 | Gln | Glu | Pro | Ser | Trp | Gly | Gly | Ala | Glu | Pro | His | | |
| | | | | 100 | | | | 105 | | | | 110 | | | | | |
| Glu | Gln | Cys | Leu | Ser | Ala | Phe | Thr | Val | His | Phe | Ser | Gly | Gln | Phe | Thr | | |
| Gly | Thr | Ala | Gly | Ala | Cys | Arg | Tyr | Gly | Pro | Phe | Gly | Pro | Pro | Pro | Pro | | |
| | | | | | | | | | | | | | | | | 115 | |
| Ser | Gln | Ala | Ser | Ser | Gly | Gln | Ala | Arg | Met | Phe | Pro | Asn | Ala | Pro | Tyr | | |
| | | | | | | | | | | | | | | | | 130 | |
| 145 | | | | | 150 | | | | | 155 | | | | | | | |
| Leu | Pro | Ser | Cys | Leu | Glu | Ser | Gln | Pro | Ala | Ile | Arg | Asn | Gln | Gly | Tyr | | |
| Ser | Thr | Val | Thr | Phe | Asp | Gly | Thr | Pro | Ser | Tyr | Gly | His | Thr | Pro | Ser | | |
| | | | | | | | | | | | | | | | | 165 | |
| His | His | Ala | Ala | Gln | Phe | Pro | Asn | His | Ser | Phe | Lys | His | Glu | Asp | Pro | | |
| | | | | | | | | | | | | | | | | 180 | |
| Met | Gly | Gln | Gln | Gly | Ser | Leu | Gly | Glu | Gln | Gln | Tyr | Ser | Val | Pro | Pro | | |
| | | | | | | | | | | | | | | | | 195 | |
| 210 | | | | | | | | | | | | | | | | | |
| Pro | Val | Tyr | Gly | Cys | His | Thr | Pro | Thr | Asp | Ser | Cys | Thr | Gly | Ser | Gln | | |
| 225 | | | | | 230 | | | | | 235 | | | | | | | |
| Ala | Leu | Leu | Leu | Arg | Thr | Pro | Tyr | Ser | Ser | Asp | Asn | Leu | Tyr | Gln | Met | | |
| Thr | Ser | Gln | Leu | Glu | Cys | Met | Thr | Trp | Asn | Gln | Met | Asn | Leu | Gly | Ala | | |
| | | | | | | | | | | | | | | | | 245 | |
| Thr | Leu | Lys | Gly | His | Ser | Thr | Gly | Tyr | Glu | Ser | Asp | Asn | His | Thr | Thr | | |
| | | | | | | | | | | | | | | | | 260 | |
| Pro | Ile | Leu | Cys | Gly | Ala | Gln | Tyr | Arg | Ile | His | Thr | His | Gly | Val | Phe | | |
| | | | | | | | | | | | | | | | | 275 | |
| 290 | | | | | | | | | | | | | | | | | |
| Arg | Gly | Ile | Gln | Asp | Val | Arg | Arg | Val | Pro | Gly | Val | Ala | Pro | Thr | Leu | | |
| 305 | | | | | 310 | | | | | 315 | | | | | | | |
| Val | Arg | Ser | Ala | Ser | Glu | Thr | Ser | Glu | Lys | Arg | Pro | Phe | Met | Cys | Ala | | |
| Tyr | Pro | Gly | Cys | Asn | Lys | Arg | Tyr | Phe | Lys | Leu | Ser | His | Leu | Gln | Met | | |
| | | | | | | | | | | | | | | | | 325 | |
| His | Ser | Arg | Lys | His | Thr | Gly | Glu | Lys | Pro | Tyr | Gln | Cys | Asp | Phe | Lys | | |
| | | | | | | | | | | | | | | | | 340 | |
| Asp | Cys | Glu | Arg | Arg | Phe | Phe | Arg | Ser | Asp | Gln | Leu | Lys | Arg | His | Gln | | |
| | | | | | | | | | | | | | | | | 355 | |
| Arg | Arg | His | Thr | Gly | Val | Lys | Pro | Phe | Gln | Cys | Lys | Thr | Cys | Gln | Arg | | |
| | | | | | | | | | | | | | | | | 370 | |
| 385 | | | | | 390 | | | | | 395 | | | | | | | |
| Lys | Phe | Ser | Arg | Ser | Asp | His | Leu | Lys | Thr | His | Thr | Arg | Thr | His | Thr | | |
| Gly | Glu | Lys | Pro | Phe | Ser | Cys | Arg | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|----------|-----|-------|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Met 1 | Gln | Ile | Phe | Val 5 | Lys | Thr | Leu | Thr | Gly 10 | Lys | Thr | Ile | Thr | Leu 15 | Glu |
| Val | Glu | Pro | Ser | Asp | Thr | Ile | Glu | Asn | Val | Lys | Ala | Lys | Ile | Gln | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Glu | Gly | Ile | Pro | Pro | Asp | Gln | Gln | Arg | Leu | Ile | Phe | Ala | Gly | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Leu | Glu | Asp | Gly | Arg | Thr | Leu | Ser | Asp | Tyr | Asn | Ile | Gln | Lys | Glu |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ser | Thr | Leu | His | Leu | Val | Leu | Arg | Leu | Arg | Gly | Ala | Met | Gly | Ser | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Val | Arg | Asp | Leu | Asn | Ala | Leu | Leu | Pro | Ala | Val | Pro | Ser | Leu | Gly | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Gly | Gly | Cys | Ala | Leu | Pro | Val | Ser | Gly | Ala | Ala | Gln | Trp | Ala | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Leu | Asp | Phe | Ala | Pro | Pro | Gly | Ala | Ser | Ala | Tyr | Gly | Ser | Leu | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Pro | Ala | Pro | Pro | Pro | Ala | Pro | Pro | Pro | Pro | Pro | Pro | Pro | Pro | His |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Phe | Ile | Lys | Gln | Glu | Pro | Ser | Trp | Gly | Gly | Ala | Glu | Pro | His | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Glu | Gln | Cys | Leu | Ser | Ala | Phe | Thr | Val | His | Phe | Ser | Gly | Gln | Phe | Thr |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gly | Thr | Ala | Gly | Ala | Cys | Arg | Tyr | Gly | Pro | Phe | Gly | Pro | Pro | Pro | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ser | Gln | Ala | Ser | Ser | Gly | Gln | Ala | Arg | Met | Phe | Pro | Asn | Ala | Pro | Tyr |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Pro | Ser | Cys | Leu | Glu | Ser | Gln | Pro | Ala | Ile | Arg | Asn | Gln | Gly | Tyr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ser | Thr | Val | Thr | Phe | Asp | Gly | Thr | Pro | Ser | Tyr | Gly | His | Thr | Pro | Ser |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| His | His | Ala | Ala | Gln | Phe | Pro | Asn | His | Ser | Phe | Lys | His | Glu | Asp | Pro |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Met | Gly | Gln | Gln | Gly | Ser | Leu | Gly | Glu | Gln | Gln | Tyr | Ser | Val | Pro | Pro |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Pro | Val | Tyr | Gly | Cys | His | Thr | Pro | Thr | Asp | Ser | Cys | Thr | Gly | Ser | Gln |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ala | Leu | Leu | Leu | Arg | Thr | Pro | Tyr | Ser | Ser | Asp | Asn | Leu | Tyr | Gln | Met |
| | | 290 | | | | 295 | | | | | 300 | | | | |
| Thr | Ser | Gln | Leu | Glu | Cys | Met | Thr | Trp | Asn | Gln | Met | Asn | Leu | Gly | Ala |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Thr | Leu | Lys | Gly | His | Ser | Thr | Gly | Tyr | Glu | Ser | Asp | Asn | His | Thr | Thr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Pro | Ile | Leu | Cys | Gly | Ala | Gln | Tyr | Arg | Ile | His | Thr | His | Gly | Val | Phe |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Arg | Gly | Ile | Gln | Asp | Val | Arg | Arg | Val | Pro | Gly | Val | Ala | Pro | Thr | Leu |
| | | 355</ | | | | | | | | | | | | | |

| Time | Lat | Long | Alt | Wind | Temp | Humid | Cloud | Vis | Ref |
|------|-------|--------|------|------|------|-------|-------|-----|------|
| 0000 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0000 |
| 0100 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0100 |
| 0200 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0200 |
| 0300 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0300 |
| 0400 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0400 |
| 0500 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0500 |
| 0600 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0600 |
| 0700 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0700 |
| 0800 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0800 |
| 0900 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 0900 |
| 1000 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1000 |
| 1100 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1100 |
| 1200 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1200 |
| 1300 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1300 |
| 1400 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1400 |
| 1500 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1500 |
| 1600 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1600 |
| 1700 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1700 |
| 1800 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1800 |
| 1900 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 1900 |
| 2000 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 2000 |
| 2100 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 2100 |
| 2200 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 2200 |
| 2300 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 2300 |
| 2400 | 10.00 | 105.00 | 1000 | 000 | 25.0 | 75 | 000 | 10 | 2400 |

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Val Leu Asp Phe Ala Pro Pro Gly Ala Ser
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Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala
1 5 10 15

<400> 413
Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu
1 5 10 15